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Poster Session

### SENSORY III

Chairperson: Pierau FK, Bad Nauheim

199. Hüttenbrink KB: The function of the ossicular chain and of the muscles of the middle ear
200. Sann H, Hammer K, Hildesheim IF, Rössler W, Pierau F-K: Substance P-containing afferent fibres modulated activity of ganglion cells in the chicken ureter
201. Wagener G, Koch C, Stahl U, Rieder G, Fruhstorfer H: Neurogenic inflammation elicited by saline of different pH and osmolality
202. Menne B, Fruhstorfer H: Differences between histamine and capsaicin flare: Effects of a H<sub>1</sub>-blocker
- + 203. Dembowski K, Offner B, Czachurski J: Effects of afferents in the superior laryngeal nerve (SLN) on sympathetic activity
204. Koltzenburg M, Wahren LK, Torebjörk HE: Dynamic changes of mechanical hyperalgesia in neuropathic pain states and healthy subjects depend on the ongoing activity of unmyelinated nociceptive afferents
- + 205. Thürauf N, Hummel T, Kobal G: Autonomic and nociceptive responses recorded at the human nasal mucosa
- + 206. Wedekind C, Reeh PW: The effects of osmotically anisotonic solutions on sensory nerve endings in rat skin, in vitro
- + 207. Kress M, Riedl B, Reeh PW: Oxygen radicals can enhance responsiveness of nociceptive afferents to inflammatory mediators
208. Siedenberg R, Treede R-D: Cognitive cerebral potentials evoked by painful laser radiant heat pulses

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### RENAL HEMODYNAMICS

Chairperson: Kirchheim H, Heidelberg

224. Persson PB, Baumann J, Ehmke H, Janssen B, Kirchheim H, Wittmann U: Nonhomeostatic behaviour of renal blood flow in the autoregulating kidney of conscious dogs
225. Jungbluth D, Schütz H, Simon-Oppermann C, Gerstberger R, Simon E: Interaction of norepinephrine and atrial natriuretic factor (ANF) in the control of renal function
226. Ehmke H, Persson PB, Just A, Nafz B, Seyfarth M, Hackenthal E, Kirchheim HR: Modulation of pressure-dependent renin release by atrial natriuretic peptide in conscious dogs
227. Parekh N, Zou AP, Li PL, Steinhausen M: Prostaglandin mediated dilation in the renal medulla in response to different vasoconstrictors
228. Schramek H, Willinger CC, Gstraunthaler G, Pfaller W: Endothelin-3 is a potent vasoconstrictor in the isolated perfused rat kidney
229. Pabst T, Nobiling R: Changes of Ca<sup>2+</sup> kinetics in glomerular mesangial cells after constrictor stimulation by extracellular ionic manipulations
230. Gabrielyskaya O, Nobiling R: Sensitivity enhancement of vasoconstrictor induced Ca<sup>2+</sup>-transients in glomerular mesangial cells by prostaglandin F<sub>2</sub>-alpha
231. Willinger CC, Schramek H, Pfaller W, Deetjen P: Effects of ultrapure polymerized bovine hemoglobin (UPPBHb) on isolated perfused rat kidney (IPRK)

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#### ION TRANSPORT

Chairperson: Fromm M, Berlin

280. Nader M, Seidler U, Classen M: Differences in the internal pH<sub>i</sub>-sensitive "modifier site" of the ilial brush border and the parietal cell basolateral anion exchanger in the rabbit
281. Acker H, Dufau E, Bölling B, Opitz N: Regulation of intracellular pH (pH<sub>i</sub>) in human malign glioma cells grown as multicellular spheroids (MG118)
282. Rose UM, van Os CH, Jansen JWCM, Bindels RJM: Anoxia-induced increase in intracellular calcium of rabbit proximal tubule cells in primary culture
283. Ritter M, Wöll E, Lang F: Cell volume in ras oncogene expressing cells
284. Hentschel H, Herter P, Mähler S, Elger M: Morphological and immunohistochemical evidence for acid-secretion in the renal tubule of elasmobranch fish
285. Iacovelli C, Caroppo R, Frömter E, Curci S: Possible involvement of sodium-bicarbonate-cotransport in bicarbonate secretion across resting fundus of frog stomach
286. van Hoek AN, Dempster JA, van Os CH: Water channels from proximal tubule and red blood cell have a functional unit size of approx. 30 kDalton
287. Frick A (technical assistance F. Schwarz): Microperfusion studies in the papillary collecting duct of the rat kidney: Saturation of the SO<sub>4</sub> mechanism
288. Steffgen J, Güse-Behling H, Herkommer B, Ehrhart-Bornstein M, Scherbaum WA, Franz HE, Bornstein SR: Demonstration of probenecid inhibitable cortisol transport in bovine adrenocortical cells
289. Fromm M, Krattenmacher R: Progestagens used for oral contraception: Mineralocorticoid and antimineralocorticoid action in rat distal colon in vitro
290. Kapturczak M, Bühler H, Lichtenstein I, Hierholzer K: Isoforms of 11β-hydroxysteroid dehydrogenase (11β-HSD) activity along the mouse nephron
291. Schwegler JS, Thiele K-P, Mildenberger S, Silbermagl S: Evidence for two separate transport systems for L-arginine in the apical and basolateral membrane of cultured proximal tubule cells (OK)

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#### PATHOPHYSIOLOGY

Chairperson: Arnold G, Düsseldorf

297. Baccari MC, Calamai F, Staderini G: Motor effects of substance P on the rabbit stomach "in vivo"
298. Tur JA, Esteban S, Dameto MC, Sastre MM, Rayo JM: Effect of cafeteria diet on passive permeability for glucose in rats' small intestine
299. Musial F, Crowell MD, Enck P, French AW: Feeding lowers defecation threshold in pigs through cholinergic pathways
300. Düring B, Mandrek K, Lüttke FE, Lepsien G, Golenhofen K: Can prostaglandins modulate ileocecal transit?
301. Wechsung E, Houvenaghe A: Substance P and gastrointestinal electromyography in the conscious piglet
302. Prieto R, Grases F, Masarova L, Costa-Bauza A, March JG, Tur JA: Effect of Rosa canina infusion and magnesium on the urinary risk factors of calcium oxalate urolithiasis
303. Gronow G, Mahysz M, Beuke H-B, Klaus N: Antagonistic amino acid effect in posthypoxic renal tubular cells. Interaction of histidine and glycine
304. Sperlich M, Reckendorfer H, Burgmann H, Spieckermann PG: Rat small bowel protection: A comparison of UW- and EC-solution
305. Minor T, Isselhard W: Promotion of postischemic outcome of the liver: SOD vs. papaverine
306. Chung C-W, Minor T, Isselhard W: Influence of SOD on the ischemic liver and on the post-ischemic liver graft

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#### SKELETAL MUSCLE I

Chairperson: Schiereck P, Utrecht

370. Hermann-Frank A, Herrmann C: Effects of changes in luminal  $[Ca^{2+}]$  on the gating behaviour of the isolated ryanodine receptor/ $Ca^{2+}$ -release channel complex of skeletal muscle sarcoplasmic reticulum
371. Wetzel P, Gros G: Effects of sulfonamides on single twitches and calcium transients of skeletal muscle fiber bundles
372. Bendel U: The velocity of the muscular contraction - comparison of empirical and theoretical relations
373. Janssen PML, van Andel AJ, Sontrop MATA, de Beer EL, Schiereck P: Modelling of the frequency characteristics of striated muscle
374. Schiereck P, de Beer EL, Crowe A, Grundeman RLF, Bras W: Orthogonal orientation of the actin filaments at long sarcomere length
375. Janssen PML, van Andel AJ, Sontrop MATA, de Beer EL, Schiereck P: Force development beyond actin-myosin overlap: excluding an artefact
376. Kraft T, Schnekenbühl S, Chalovich JM, Yu LC, Brenner B: Activation of the contractile system of skinned rabbit psoas fibers by calcium vs. activation by NEM-modified-S1
377. Kraft T, Chalovich JM, Brenner B: Cross-bridge turnover kinetics in the presence of actin-binding caldesmon fragments

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#### SKELETAL MUSCLE II

Chairperson: Neumcke B, Homburg

378. Siegenbeek van Heukelom J: Effect of isoproterenol on membrane potential of mouse skeletal muscle fibres in low potassium media
379. Hehl S, Neumcke B: Stimulation of K(ATP) channels in mouse skeletal muscle by Mg-ATP
380. Seewald MJ, Brinkmeier H, Rüdel R: Bradykinin increases transiently the intracellular  $Ca^{2+}$  concentration in culture human myotubes and fibroblasts
381. Wischmeyer E, Weber-Schürholz S, Laurien M, Jockusch H: Reconstituted sarcolemmal anion channels and possible relation to myotonia in the mouse
382. de Haan A, de Ruiter CJ, Sargeant AJ: Low specific force and efficiency in skeletal muscles of young rats
383. van Heijst GBV, Finkle H, Voest EE, Schiereck P, de Beer EL: Doxorubicin enhances tension and calcium sensitivity in skinned single skeletal muscle fibres
384. Degens H, Turek Z, Binkhorst RA: Influence of age and compensatory hypertrophy on contraction characteristics of rat M. plantaris
385. Nagesser AS, van der Laarse WJ, Elzinga G: Lactate efflux from fatigued single slow-twitch muscle fibres of *Xenopus laevis*
386. v Brada E, Keizer HA, v Kranenburg G, Geurten P, Kuipers H: Testosterone spares glycogen through increased glycogen synthase activities without changes in glycogen phosphorylase activities in red soleus muscle fibres of female
387. Hinsche G, Veigel C, Fink RHA: The effects of colchicine on sarcolemma vesicle production of human skeletal muscle fibres

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#### SMOOTH MUSCLE I

Chairperson: Peiper M, Hamburg

393. Neu E, Michailov MC, Tirsch W, Martin D, Welscher U: On the computerized evaluation of the electrical activity of smooth muscle cells (urinary bladder of guinea-pig)
394. Kalthof B, Bechem M, Pott L, Schramm M: Expression of different  $Ca^{2+}$ -regulation mechanisms in cultured, vascular smooth muscle cells depending on their growth-state
395. Hopp H-H, Schubert R, Schiefer A, Engel H, Isenberg G:  $Ca^{2+}$  channel currents in myocytes from tail arteries of normotensive or hypertensive rats
396. Czifrusz A, Matyas S, Fleckenstein-Grün G: Reduction by calcium antagonists of nicotine-induced net calcium uptake into aortic media cells (Wistar rats)
397. Pfründer D, Kreye VAW:  $BK_{Ca}$  channels do probably not mediate noradrenaline-induced  $^{86}Rb$  Efflux in vascular smooth muscle
398. Berweck S, Stahl F, Lepple-Wienhues A, Helbig H, Thieme H, Wiederholt M: Effect of a novel  $K^{+}$  channel opener on a maxi  $K^{+}$  channel and membrane voltage in cultured retinal capillary pericytes
399. Dee J, Peiper U: Different contraction kinetics in portal vein and tracheal smooth muscle of normotensive and spontaneously hypertensive rats

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#### SMOOTH MUSCLE II

Chairperson: Pfitzer G, Heidelberg

400. Wendt-Gallitelli MF, Isenberg G: X-ray microprobe analysis of elemental composition in myocytes isolated from guinea-pig urinary bladder
401. Endck P, Herdmann J, Zacchi P, Ostermann U: Electromechanical coupling in the human anal sphincter
402. Pfitzer G, Schmidt U, Troschka M, Gröschel-Stewart U: Modulation of the relation between force and myosin light chain phosphorylation in a skinned smooth muscle by okadaic acid and extraction of SM 22 and calponin
403. Blank ME, Krienke B, Peiper U: Influence of the calcium ionophore A-23 187 on the phosphorylation of the 20 kDa myosin-light-chains of the resting rat tracheal muscle at low extracellular calcium
404. Morano I, Erb G, Sögl B: Different expression and post-translational modification of myosin heavy and light chains increased shortening velocity in the pregnant rat uterus
405. Kaune R, Munson S, Bikle DD:  $1,25-(OH)_2D_3$  stimulated calmodulin binding to brush border myosin I is not caused by different phosphorylation rates
406. Satoh S, Krautz R, Ganten D, Pfitzer G: Coronary arteries of spontaneously hypertensive rats show hypercontractility to serotonin through G-protein mediated mechanisms

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#### CORONARY PHYSIOLOGY, METABOLISM

Chairperson: van Beek JHGM, Amsterdam

- 412. Janssen F, Schulz R, Guth BD, Bartels C, Bergmann P, Heusch G: Coronary hyperperfusion does not increase regional contractile function but oxygen consumption of the "stunned myocardium"
- 413. Strey C, Goetz RM, Krivokuca M, Holtz J: Partial restoration of the attenuated dipyridamole-responsiveness in the coronary bed of rats with left ventricular hypertrophy by nitrovasodilators
- 414. Deussen A, Kroll K: Model analysis of adenosine (ADO) transport and metabolism in the isolated guinea pig heart during ischemia
- 415. Schwartz LM, Raschke P, Becker BF, Gerlach E: Adenosine contributes to neutrophil-mediated loss of function in postischemic guinea pig hearts
- 416. Reffelmann R, Kammermeier H: Energetics and function of hypoxic isolated rat hearts as influenced by modulation of the K<sup>+</sup>-ATP-channel-system
- 417. van Beek JHGM, Hak JB, Eijgelshoven MHJ: Oxidative phosphorylation in the myocardium may be strongly stimulated by undetectably small changes in high-energy phosphates
- 418. Eijgelshoven MHJ, Hak JB, van Beek JHGM, Westerhof N: Influence of heart rate on the response time of cardiac mitochondrial oxygen consumption to metabolic demand steps
- 419. Gronczewski J, Jans AWH: Acute effects of cyclosporin A on the isolated perfused rat heart studied by <sup>31</sup>P NMR
- 420. Noll T, Piper HM: Energetic differences between deep hypoxia and "chemical anoxia" in heart cells
- 421. Storch E, Günther J, Holzhütter HG, Lange J: Approach to a quantitative analysis of the dynamic of the myocardial Ca<sup>2+</sup> concentration

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#### CARDIAC METABOLISM

Chairperson: Zimmer H-G, München

- 422. Kolbeck-Rühmkorf C, Zimmer H-G: Molecular biological studies on the oxidative pentose phosphate pathway in the rat heart
- 423. Wiesner RJ, Morano I, Rüegg JC: Reexpression of the V3 isoform of myosin heavy chain following acute pressure overload hypertrophy of rat ventricle is regulated at a posttranscriptional level
- 424. Kaling M, Morano I: Androgens regulate cardiac contraction by increasing the rate of alpha-MHC gene transcription
- 425. Morano I, Adler K, Böhm M, Weismann K, Knorr A, Erdmann E: Correlation of myosin heavy chain expression in the rat with cAMP in different models of hypertension-induced cardiac hypertrophy
- 426. Strauss JD, Van Eyk JE, Zeugner C, Bletz C, Rüegg JC: Reconstitution of calcium-dependent regulation of isometric tension and ATPase in TnI-deficient skinned porcine cardiac muscle
- 427. Schliuter K-D, Piper HM: Trophic effects of parathyroid hormone on adult ventricular cardiomyocytes
- 428. Nábauer M, Beuckelmann DJ, Nábauer T, Erdmann E: Direct monitoring of sarcomere length in single isolated myocytes by spectral analysis of sarcomere pattern
- 429. Fischer Y, Kranz S, Kammermeier H: Possible link between calcium and stimulation of glucose transport in cardiac myocytes
- 430. Vork MM, Glatz JFC, van der Vusse GJ: Fatty acid-binding protein (FABP) enhances the long-chain fatty acid (FA) translocation in heart myocytes
- 431. Kleine AH, Glatz JFC, van Nieuwenhoven FH, Willems GM, Hermens WT, van Diejen-Visser MP, van der Vusse GJ: Relation between the release of heart fatty acid-binding protein and of myoglobin into plasma after myocardial infarction in man
- 432. Isensee H, Jacob R: Fatty acid composition of cardiac membrane phospholipids. Significance for susceptibility to ischemia-induced arrhythmias